**Size:** 17,228 acres

Mission: Manufactured and stored chemical munitions

HRS Score: 58.15; placed on NPL in July 1987

IAG Status: IAG and Federal Facility Agreement signed in 1989

Contaminants: Pesticides, chemical agents, VOCs, chlorinated organics, PCBs, UXO, heavy metals, and solvents

Media Affected: Groundwater and soil

Funding to Date: \$875.9 million

Estimated Cost to Completion (Completion Year): \$934.5 million (FY2033) Final Remedy in Place and Response Complete Date for All Sites: FY2011



## Adams County, Colorado

## **Restoration Background**

Rocky Mountain Arsenal operated as a chemical munitions production facility from 1942 until 1982. It has been the focus of an aggressive soil and groundwater contamination cleanup program since the 1980s. Contaminated sites included liquid waste in unlined and lined lagoons and basins, open burning and detonation areas, and landfills that received both liquid and solid wastes.

In FY84, the Army completed a Preliminary Assessment and Site Inspection that identified 179 potentially contaminated sites. Subsequently, the installation was divided into two operable units (OUs): the On-Post OU and the Off-Post OU. The Army completed Remedial Investigation and Feasibility Study activities for both OUs by FY96. Identification of additional sites raised the total number to 209.

The Army has completed 14 emergency responses at 17 sites. Under this program, four groundwater extraction and treatment systems have been installed on site and one off site. All five systems continue to operate. In FY90, 10.5 million gallons of chemical wastewater and 580,000 cubic yards of contaminated soil were removed from the Basin F Area and placed in temporary storage facilities. Hundreds of drums of waste and tons of asbestos and related materials were disposed of off post. The installation closed 450 abandoned wells and the sewer systems in the South Plants, and closed and removed the former hydrazine blending facility. The installation used an innovative submerged quench incineration (SOI) system to remediate liquid waste removed from Basin F. The SQI treated more than 16 million gallons of scrubber brine and recovered more than 250,000 pounds of copper. The Army later dismantled the system and removed it from the installation.

In FY94, the Army converted its Technical Review Committee to a Restoration Advisory Board (RAB). In FY96, the Army and regulators signed Records of Decision (RODs) for both OUs. The Army formed a partnership between the U.S. Fish and Wildlife Service, and Shell Oil Company for oversight of the program management contract.

In FY97, the oversight partnership, called the Remediation Venture Office (RVO), developed a Remedial Design Implementation Schedule (RDIS) for the On-Post OU. The Army completed Remedial Designs (RDs) and awarded construction contracts for chemical and sanitary sewer plugging and for the Army-Shell trenches remediation. The design for the consolidation area within Basin A was also completed.

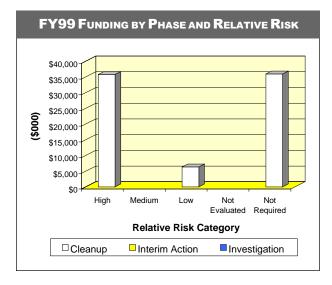
## **FY98 Restoration Progress**

The RVO awarded the Program Management Contract (PMC) that will manage, design, and execute the major on-post Remedial Actions (RAs). The design for an on-site hazardous waste landfill (HWL) was completed, and construction began at the Basin A Consolidation Area and the HWL. RAs were completed for chemical and sanitary sewer plugging, off-post soil tillage, the off-post water supply system, and modification of the North Boundary Containment System for treatment of N-nitro-sodimthyamine. The PMC contractor completed RD for four of the Phase I (outlying areas) RAs. Construction on the Army-Shell Complex Trenches RA was delayed for performance of additional geophysical survey work. Removal of chemical processing equipment and asbestos-containing material continued. The implementation of installationwide programs and operation of groundwater treatment systems continued.

The RAB continued to hold monthly meetings, where project progress reports were provided, and to conduct other RAB business.

## Plan of Action

- Complete the remaining Phase I (outlying areas) RA designs (six projects) in FY99
- Complete startup construction for the Basin A Consolidation Area and HWL and initiate facilities operation in FY99
- Award contracts for Phase I RAs and begin remediation in FY99
- Start RDs for Phase II (South Plants Area) RAs in FY99
- Continue implementing installationwide programs and operating groundwater treatment systems in FY99
- · Continue off-post and on-post water acquisition tasks in FY99



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